

LISTING OF THE CLAIMS

This listing of claims is provided for the convenience of the Examiner.

1. (Previously Presented) A method of cementing, comprising:
 - providing a cement composition comprising a hydraulic cement, a set retarder, water, and a particle-size distribution-adjusting agent that comprises a cationic polymer;
 - permitting the cement composition to remain in a slurry state for a period of time prior to the cement composition being activated;
 - activating the cement composition wherein activating the cement composition comprises adding an activator composition to the cement composition;
 - placing the cement composition in a subterranean formation penetrated by a well bore; and
 - permitting the cement composition to set therein.
2. (Previously Presented) The method of claim 1 wherein the water is fresh water, salt water, brine, sea water, or a mixture thereof.
3. (Previously Presented) The method of claim 1 wherein the water is present in the cement composition in an amount sufficient to form a pumpable slurry.
4. (Original) The method of claim 3 wherein the water is present in the cement composition in an amount in the range of from about 25% to about 150% by weight of the cement.
5. (Original) The method of claim 1 wherein the hydraulic cement is a Portland cement, pozzolana cement, gypsum cement, high alumina cement, silica cement, or a high alkalinity cement.
6. (Previously Presented) The method of claim 1 wherein providing the cement composition comprises providing a densified cement composition.
7. (Previously Presented) The method of claim 6 wherein providing a densified cement composition comprises adding high-density particles to the cement composition.
8. (Previously Presented) The method of claim 6 wherein providing the densified cement composition comprises reducing the amount of water in the cement composition.
9. (Original) The method of claim 6 wherein the cement composition further comprises a yield stress reducing agent.

10. (Original) The method of claim 1 wherein the set retarder is phosphonic acid or a phosphonic acid derivative.
11. (Original) The method of claim 10 wherein the phosphonic acid derivative is a sodium salt of phosphonic acid.
12. (Original) The method of claim 1 wherein the set retarder is present in the cement composition in an amount in the range of from about 0.1% to about 5% by weight of the cement.
13. (Cancelled)
14. (Previously Presented) The method of claim 1 wherein the activator composition is added in an amount sufficient to enable the cement composition to achieve an effective compressive strength.
15. (Original) The method of claim 14 wherein the activator composition is added in an amount in the range of from about 0.1 to about 5% by weight of the cement.
16. (Original) The method of claim 15 wherein the activator composition comprises a mixture of a trialkanolamine and an alkali or alkaline earth metal hydroxide.
17. (Previously Presented) The method of claim 16 wherein the trialkanolamine is selected from the group consisting of triethanolamine, tripropanolamine, and triisopropanolamine.
18. (Original) The method of claim 16 wherein the alkali or alkaline earth metal hydroxide is selected from the group consisting of sodium hydroxide and potassium hydroxide.
19. (Original) The method of claim 16 wherein the trialkanolamine is present in an amount in the range of from about 0.1% to about 50% by weight of the activator composition.
20. (Original) The method of claim 16 wherein the alkali metal hydroxide is present in an amount in the range of from about 50% to about 99.9% by weight of the activator composition.
21. (Original) The method of claim 18 wherein the alkali metal hydroxide is sodium hydroxide.
22. (Original) The method of claim 16 wherein the activator composition is added to the cement composition in the form of a solution diluted by water.
23. (Original) The method of claim 16 wherein the activator composition is added to the cement composition while the cement composition is in storage.

24. (Original) The method of claim 16 wherein the activator composition is added to the cement composition while the cement composition is being placed in the subterranean formation.
25. (Previously Presented) The method of claim 1 wherein the particle-size distribution-adjusting agent is present in the cement composition in an amount sufficient to adjust the particle-size distribution of the cement composition such that the onset of gelation is forestalled.
26. (Previously Presented) The method of claim 1 wherein the cement composition comprising the particle-size distribution-adjusting agent has a particle-size distribution that is narrower than that of a cement composition lacking the particle-size distribution-adjusting agent.
27. (Original) The method of claim 1 wherein the particle-size distribution-adjusting agent is present in the cement composition in an amount in the range of from about 0.01% to about 4% by weight of the cement.
28. (Previously Presented) The method of claim 1 wherein the particle-size distribution-adjusting agent is a compound that affects the particle-size distribution of the cement such that the rheology of the cement composition remains substantially stable.
29. (Cancelled)
30. (Previously Presented) The method of claim 1 wherein the cationic polymer is selected from the group consisting of cationic polyacrylamides; cationic hydroxyethyl cellulose; poly(dimethyldiallylammonium chloride); and cationic starches.
31. (Original) The method of claim 1 wherein the cement composition further comprises a surfactant, a dispersant, a salt, mica, a formation conditioning agent, a fixed-density weighting agent, vitrified shale, fumed silica, bentonite, fly ash, a fluid loss control additive, an expanding additive, a defoamer, a viscosifier, or a mixture thereof.
32. (Previously Presented) The method of claim 1 further comprising permitting the cement composition to remain in a slurry state for at least 24 hours.
33. (Previously Presented) The method of claim 1 further comprising permitting the cement composition to remain in a slurry state for at least two weeks.
34. (Previously Presented) The method of claim 1 further comprising permitting the cement composition to remain in a slurry state for more than two weeks.

35. (Original) The method of claim 1 wherein the suspension properties of the cement composition are substantially uniform throughout the cement composition.

36. (Original) The method of claim 32 wherein the rheological properties of the cement composition remain substantially constant while the cement composition remains in a slurry state.

37. (Previously Presented) The method of claim 9 wherein the yield stress reducing agent is selected from the group consisting of a sulfonated melamine formaldehyde condensate; a sulfonated naphthalene condensate; and a sulfite adduct of an acetone formaldehyde condensate.

38. (Original) The method of claim 1 wherein the cement composition has a density in the range of from about 4 pounds per gallon to about 25 pounds per gallon.

39. (Previously Presented) The method of claim 1 wherein the cement composition further comprises water, and wherein the water is present in the cement composition in an amount in the range of from about 25% to about 150% by weight of the cement; wherein the set retarder is a phosphonic acid or phosphonic acid derivative; wherein activating the cement composition comprises adding an activator composition to the cement composition; wherein the activator composition comprises a mixture of triethanolamine and an alkali metal hydroxide; and wherein the particle-size distribution-adjusting agent is present in the cement composition in an amount in the range of from about 0.01 % to about 4 % by weight of the cement.

40-122. (Cancelled)

123. (Previously Presented) A method of cementing, comprising:

- providing a cement composition comprising a hydraulic cement, a set retarder, water, and a particle-size distribution-adjusting agent that comprises a cationic polymer;

- permitting the cement composition to remain in a slurry state for at least 24 hours;

- activating the cement composition wherein activating the cement composition comprises adding an activator composition to the cement composition;

- placing the cement composition in a subterranean formation penetrated by a well bore; and

- permitting the cement composition to set therein.

124. (Previously Presented) The method of claim 123 wherein the water is fresh water, salt water, brine, sea water, or a mixture thereof.

125. (Previously Presented) The method of claim 123 wherein the water is present in the cement composition in an amount sufficient to form a pumpable slurry.
126. (Previously Presented) The method of claim 123 wherein the water is present in the cement composition in an amount in the range of from about 25% to about 150% by weight of the cement.
127. (Previously Presented) The method of claim 123 wherein the hydraulic cement is a Portland cement, pozzolana cement, gypsum cement, high alumina cement, silica cement, or a high alkalinity cement.
128. (Previously Presented) The method of claim 123 wherein the cement composition is a densified cement composition.
129. (Previously Presented) The method of claim 128 wherein the densified cement composition comprises high-density particles.
130. (Previously Presented) The method of claim 128 wherein the cement composition further comprises a yield stress reducing agent.
131. (Previously Presented) The method of claim 130 wherein the yield stress reducing agent is selected from the group consisting of a sulfonated melamine formaldehyde condensate; a sulfonated naphthalene condensate; and a sulfite adduct of an acetone formaldehyde condensate.
132. (Previously Presented) The method of claim 123 wherein the set retarder is phosphonic acid or a phosphonic acid derivative.
133. (Previously Presented) The method of claim 132 wherein the phosphonic acid derivative is a sodium salt of phosphonic acid.
134. (Previously Presented) The method of claim 123 wherein the set retarder is present in the cement composition in an amount in the range of from about 0.1% to about 5% by weight of the cement.
135. (Cancelled)

136. (Previously Presented) The method of claim 123 wherein the activator composition is added in an amount sufficient to enable the cement composition to achieve an effective compressive strength.
137. (Previously Presented) The method of claim 123 wherein the activator composition is added in an amount in the range of from about 0.1 to about 5% by weight of the cement.
138. (Previously Presented) The method of claim 123 wherein the activator composition comprises a mixture of a trialkanolamine and an alkali or alkaline earth metal hydroxide.
139. (Previously Presented) The method of claim 138 wherein the trialkanolamine is selected from the group consisting of triethanolamine, tripropanolamine, and triisopropanolamine.
140. (Previously Presented) The method of claim 138 wherein the alkali or alkaline earth metal hydroxide is selected from the group consisting of sodium hydroxide and potassium hydroxide.
141. (Previously Presented) The method of claim 138 wherein the trialkanolamine is present in an amount in the range of from about 0.1% to about 50% by weight of the activator composition.
142. (Previously Presented) The method of claim 138 wherein the alkali metal hydroxide is present in an amount in the range of from about 50% to about 99.9% by weight of the activator composition.
143. (Previously Presented) The method of claim 138 wherein the alkali metal hydroxide is sodium hydroxide.
144. (Previously Presented) The method of claim 123 wherein the activator composition is added to the cement composition in the form of a solution diluted by water.
145. (Previously Presented) The method of claim 123 wherein the activator composition is added to the cement composition while the cement composition is in storage.
146. (Previously Presented) The method of claim 123 wherein the activator composition is added to the cement composition while the cement composition is being placed in the subterranean formation.

147. (Previously Presented) The method of claim 123 wherein the particle-size distribution-adjusting agent is present in the cement composition in an amount sufficient to adjust the particle-size distribution of the cement composition such that the onset of gelation is forestalled.
148. (Previously Presented) The method of claim 123 wherein the cement composition comprising the particle-size distribution-adjusting agent has a particle-size distribution that is narrower than that of a cement composition lacking the particle-size distribution-adjusting agent.
149. (Previously Presented) The method of claim 123 wherein the particle-size distribution-adjusting agent is present in the cement composition in an amount in the range of from about 0.01% to about 4% by weight of the cement.
150. (Previously Presented) The method of claim 123 wherein the particle-size distribution-adjusting agent is a compound that affects the particle-size distribution of the cement such that the rheology of the cement composition remains substantially stable.
151. (Previously Presented) The method of claim 123 wherein the cationic polymer is selected from the group consisting of cationic polyacrylamides; cationic hydroxyethyl cellulose; poly(dimethyldiallylammonium chloride); and cationic starches.
152. (Previously Presented) The method of claim 123 wherein the cement composition further comprises a surfactant, a dispersant, a salt, mica, a formation conditioning agent, a fixed-density weighting agent, vitrified shale, fumed silica, bentonite, fly ash, a fluid loss control additive, an expanding additive, a defoamer, a viscosifier, or a mixture thereof.
153. (Previously Presented) The method of claim 123 further comprising permitting the cement composition to remain in a slurry state for at least two weeks.
154. (Previously Presented) The method of claim 123 further comprising permitting the cement composition to remain in a slurry state for more than two weeks.
155. (Previously Presented) The method of claim 123 wherein the suspension properties of the cement composition are substantially uniform throughout the cement composition.

156. (Previously Presented) The method of claim 123 wherein the rheological properties of the cement composition remain substantially constant while the cement composition remains in a slurry state.
157. (Previously Presented) The method of claim 123 wherein the cement composition has a density in the range of from about 4 pounds per gallon to about 25 pounds per gallon.
158. (Previously Presented) The method of claim 123 wherein the cement composition further comprises water, and wherein the water is present in the cement composition in an amount in the range of from about 25% to about 150% by weight of the cement; wherein the set retarder is a phosphonic acid or phosphonic acid derivative; wherein activating the cement composition comprises adding an activator composition to the cement composition; wherein the activator composition comprises a mixture of triethanolamine and an alkali metal hydroxide; and wherein the particle-size distribution-adjusting agent is present in the cement composition in an amount in the range of from about 0.01 % to about 4 % by weight of the cement.
159. (Previously Presented) A method of cementing, comprising:
- providing a cement composition comprising a hydraulic cement, a set retarder, water, and a particle-size distribution-adjusting agent that comprises a cationic polymer;
 - permitting the cement composition to remain in a slurry state for at least two weeks;
 - activating the cement composition wherein activating the cement composition comprises adding an activator composition to the cement composition;
 - placing the cement composition in a subterranean formation penetrated by a well bore; and
 - permitting the cement composition to set therein.
160. (Previously Presented) The method of claim 159 wherein the water is fresh water, salt water, brine, sea water, or a mixture thereof.
161. (Previously Presented) The method of claim 159 wherein the water is present in the cement composition in an amount sufficient to form a pumpable slurry.

162. (Previously Presented) The method of claim 159 wherein the water is present in the cement composition in an amount in the range of from about 25% to about 150% by weight of the cement.
163. (Previously Presented) The method of claim 159 wherein the hydraulic cement is a Portland cement, pozzolana cement, gypsum cement, high alumina cement, silica cement, or a high alkalinity cement.
164. (Previously Presented) The method of claim 159 wherein the cement composition is a densified cement composition.
165. (Previously Presented) The method of claim 164 wherein the densified cement composition comprises high-density particles.
166. (Previously Presented) The method of claim 164 wherein the cement composition further comprises a yield stress reducing agent.
167. (Previously Presented) The method of claim 166 wherein the yield stress reducing agent is selected from the group consisting of a sulfonated melamine formaldehyde condensate; a sulfonated naphthalene condensate; and a sulfite adduct of an acetone formaldehyde condensate.
168. (Previously Presented) The method of claim 159 wherein the set retarder is phosphonic acid or a phosphonic acid derivative.
169. (Previously Presented) The method of claim 168 wherein the phosphonic acid derivative is a sodium salt of phosphonic acid.
170. (Previously Presented) The method of claim 159 wherein the set retarder is present in the cement composition in an amount in the range of from about 0.1% to about 5% by weight of the cement.
171. (Cancelled)
172. (Previously Presented) The method of claim 159 wherein the activator composition is added in an amount sufficient to enable the cement composition to achieve an effective compressive strength.

173. (Previously Presented) The method of claim 159 wherein the activator composition is added in an amount in the range of from about 0.1 to about 5% by weight of the cement.
174. (Previously Presented) The method of claim 159 wherein the activator composition comprises a mixture of a trialkanolamine and an alkali or alkaline earth metal hydroxide.
175. (Previously Presented) The method of claim 174 wherein the trialkanolamine is selected from the group consisting of triethanolamine, tripropanolamine, and triisopropanolamine.
176. (Previously Presented) The method of claim 174 wherein the alkali or alkaline earth metal hydroxide is selected from the group consisting of sodium hydroxide and potassium hydroxide.
177. (Previously Presented) The method of claim 174 wherein the trialkanolamine is present in an amount in the range of from about 0.1% to about 50% by weight of the activator composition.
178. (Previously Presented) The method of claim 174 wherein the alkali metal hydroxide is present in an amount in the range of from about 50% to about 99.9% by weight of the activator composition.
179. (Previously Presented) The method of claim 174 wherein the alkali metal hydroxide is sodium hydroxide.
180. (Previously Presented) The method of claim 159 wherein the activator composition is added to the cement composition in the form of a solution diluted by water.
181. (Previously Presented) The method of claim 159 wherein the activator composition is added to the cement composition while the cement composition is in storage.
182. (Previously Presented) The method of claim 159 wherein the activator composition is added to the cement composition while the cement composition is being placed in the subterranean formation.
183. (Previously Presented) The method of claim 159 wherein the particle-size distribution-adjusting agent is present in the cement composition in an amount sufficient to adjust the particle-size distribution of the cement composition such that the onset of gelation is forestalled.

184. (Previously Presented) The method of claim 159 wherein the cement composition comprising the particle-size distribution-adjusting agent has a particle-size distribution that is narrower than that of a cement composition lacking the particle-size distribution-adjusting agent.
185. (Previously Presented) The method of claim 159 wherein the particle-size distribution-adjusting agent is present in the cement composition in an amount in the range of from about 0.01% to about 4% by weight of the cement.
186. (Previously Presented) The method of claim 159 wherein the particle-size distribution-adjusting agent is a compound that affects the particle-size distribution of the cement such that the rheology of the cement composition remains substantially stable.
187. (Previously Presented) The method of claim 159 wherein the cationic polymer is selected from the group consisting of cationic polyacrylamides; cationic hydroxyethyl cellulose; poly(dimethyldiallylammonium chloride); and cationic starches.
188. (Previously Presented) The method of claim 159 wherein the cement composition further comprises a surfactant, a dispersant, a salt, mica, a formation conditioning agent, a fixed-density weighting agent, vitrified shale, fumed silica, bentonite, fly ash, a fluid loss control additive, an expanding additive, a defoamer, a viscosifier, or a mixture thereof.
189. (Previously Presented) The method of claim 159 wherein the suspension properties of the cement composition are substantially uniform throughout the cement composition.
190. (Previously Presented) The method of claim 159 wherein the rheological properties of the cement composition remain substantially constant while the cement composition remains in a slurry state.
191. (Previously Presented) The method of claim 159 wherein the cement composition has a density in the range of from about 4 pounds per gallon to about 25 pounds per gallon.